

REMARKS

Favorable reconsideration, reexamination, and allowance of the present patent application are respectfully requested in view of the following remarks.

Amendments

No amendments are made at this time. Claims 1, 6-14 are pending and under examination. Claims 2-5 have been cancelled.

Rejection under 35 U.S.C. § 112, first paragraph

In the Office Action, beginning at page 2, Claims 1, 7, 10, and 12 were rejected under 35 U.S.C. § 112, first paragraph, as reciting subject matters that allegedly fail to comply with the scope of enablement requirement. Applicant respectfully requests reconsideration of this rejection.

As described in Examples 2 and 3 of the specification and the Declarations under 37 C.F.R. §1.132 submitted on March 28, 2005 and May 5, 2006, the effect disruption and concomitant inactivation of the *rmf* gene improved production of L-lysine, L-glutamic acid, and L-typtophan. Also, as shown in these examples and the Declarations, disruption of the *rmf* gene improved bacterial growth.

It is well known in the field of bacterial fermentaion that the production of L-amino acids from bacteria depends on the bacterial mass and ability of the bacteria to produce L-amino acids per unit of bacterial mass. Therefore, improving the growth of the bacteria will lead to improved production of any L-amino acid. It is also known in the art that many strains of *E. coli* are able to produce various L-amino acids.

Therefore, one of ordinary skill in the art would be enabled to determine the productivity of L-amino acids in other know bacterial strains, particularly those known to produce L-amino acids other than L-lysine, L-glutamic acid, and L-tryptophan, based upon the working examples provided regarding mutating the endogenous RMF protein so that the RMF protein is inactive in known *E. coli* strains. Thus, production of L-amino acids other than L-lysine, L-glutamic acid, and L-tryptophan, is enabled. No undue experimentation is required since *E. coli* bacterial strains are known for producing any L-amino acid, and the specification clearly teaches that inactivation of the RMF gene will

improve bacterial growth and increase production of the L-amino acid known to be produced in the chosen strain.

Furthermore, the genus of L-amino acids is fairly small in that there are only 20 known naturally occurring L-amino acids. These molecules are all fairly small and similar in their structure and function, although some are known to be basic, acidic, branched chain, or cyclical. The three exemplified L-amino acids in the present specification and Declarations represent several of these various groups in that L-glutamic acid is acidic, L-lysine is basic, and L-tryptophan is cyclical. Such evidence is indicative of the method of the present invention being effective and expected to be effective by the person of ordinary skill in the art for a broad range of types of L-amino acids. Furthermore, exemplification of every embodiment is not required to satisfy 35 U.S.C. §112, 1st paragraph, and inoperative embodiments are permitted (*Atlas Powder Co. v. E.I. duPont de Nemours and Co.*, 750 F.2d 1569, 1577 (Fed. Cir. 1984)).

For at least the foregoing reasons, Applicant respectfully submits that the Claims fully comply with 35 U.S.C. § 112, first paragraph, and therefore respectfully requests withdrawal of the rejection thereof under 35 U.S.C. § 112.

Conclusion


For at least the foregoing reasons, Applicant respectfully submits that the present patent application is in condition for allowance. An early indication of the allowability of the present patent application is therefore respectfully solicited.

If Examiner Fronda believes that a telephone conference with the undersigned would expedite passage of the present patent application to issue, he is invited to call on the number below.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and the Commissioner is hereby authorized to charge fees necessitated by this paper, and to credit all refunds and overpayments, to our Deposit Account 50-2821.

Respectfully submitted,

By: _____


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Date: April 26, 2007